

**APHIS Evaluation of the Classical Swine Fever Status of East Anglia
(Counties of Norfolk, Suffolk, and Essex)
November 2002**

**Animal and Plant Health Inspection Service
Veterinary Services**

Executive Summary

This evaluation assesses the risk of importing Classical Swine Fever (CSF) into the United States from animals and animal products originating from East Anglia (Counties of Norfolk, Suffolk, and Essex), England. This evaluation constitutes a follow-up to an interim rule published in the *Federal Register*, on September 20, 2000, that removed Norfolk, Suffolk, and Essex from the list of regions that the U.S. Department of Agriculture (USDA) does not consider to be affected with CSF. [1]

When CSF was confirmed in Woodbridge, Suffolk, East Anglia, on August 8, 2000, the Animal and Plant Health Inspection Service (APHIS) took administrative action and banned imports of swine and swine products from Great Britain. Subsequently, CSF spread to Norfolk and Essex Counties and within Suffolk County. On September 20, 2000, APHIS published an interim rule that regionalized Great Britain by removing East Anglia from the list of regions that USDA does not consider to be affected with CSF, an action that placed additional restrictions on the importation of pork and pork products and prohibited the importation of swine into the United States from East Anglia. Under that rule, trade in swine and swine products from the remainder of Great Britain was resumed.

In this document, APHIS presents the results of its re-evaluation of the CSF status of East Anglia. This re-evaluation was conducted on the basis of documentation supplied by the Ministry of Agriculture, Fisheries and Food (MAFF) in 2000, results from a site visit conducted at the time of the outbreaks by APHIS personnel, and additional information provided by the Department for Environment, Food & Rural Affairs (DEFRA) in 2002 (MAFF is now part of DEFRA).

APHIS personnel conducted the site visit in September 2000, to assess whether the regionalization action taken by the interim rule appeared to be appropriate to the situation. At the time of the visit, CSF had been detected on 13 premises. The last confirmed outbreak was November 3, 2000, and a total of 16 premises had CSF detected by that time.

Relevant to the timing of this re-evaluation, foot-and-mouth disease (FMD) broke out in the United Kingdom (UK) in February 2001. An epidemic developed, which lasted until September 2001. APHIS removed the UK from the list of regions that it considered to be FMD free. Since the FMD restrictions were applicable to swine, pork, and products, there was no immediate impetus to re-evaluate East Anglia for CSF status. However, the UK ultimately eradicated FMD (the last outbreak being recorded in October 2001), and East Anglia remained CSF-free. Therefore, APHIS is proceeding with its re-evaluation of the CSF status of East Anglia.

Introduction

On August 8, 2000, MAFF reported an outbreak of CSF, also known as hog cholera, in Suffolk County, East Anglia. East Anglia is a region composed of three counties, Suffolk, Norfolk, and Essex. Over the next several months, CSF was ultimately confirmed on a total of 16 premises in the region.

Following the initial outbreak, APHIS issued an administrative ban on the importation of

animals and animal products from Great Britain. APHIS then reinforced this ban with an interim rule that incorporated the ban into its regulations. [1]

APHIS stated the following in the preamble of the interim rule: “Although we are removing East Anglia from the list of regions in which hog cholera is not known to exist, we recognize that MAFF immediately responded to the detection of the disease by imposing restrictions on the movement of pork, pork products, and swine from the affected area and initiating measures to eradicate the disease. At the time of publication of this interim rule, it appears that the outbreak is well controlled. Because of MAFF’s efforts to ensure that hog cholera does not spread beyond East Anglia, we intend to reassess the situation....” The interim rule released all of Great Britain from restrictions with the exception of the three counties in East Anglia.

To ensure that its action was appropriate, APHIS personnel conducted a site visit to the region in September 2000. The site visit report confirmed that the actions being taken to confine CSF to East Anglia appeared to be appropriate. [2]

APHIS stated further in its interim rule, “...we intend to reassess the situation, in accordance with the standards of the Office International des Epizooties.... This future assessment will determine whether it is necessary to continue to prohibit the importation of swine and restrict the importation of pork and pork products from East Anglia or whether we can restore East Anglia to the list of regions in which hog cholera is not known to exist.”

Timely action towards reassessing the risk was delayed because of subsequent FMD outbreaks in the UK. However, this evaluation is intended to reassess that risk.

Objective

The objective of this review is to evaluate the risk associated with the reinstatement of the three counties in East Anglia to the list of regions that APHIS recognizes as regions not known to have CSF.

APHIS Approach to Regionalization

MAFF provided information to APHIS regarding the status of the eradication efforts in the region during the outbreak in 2000. In addition, a team of APHIS personnel conducted a site visit to validate the information provided and to evaluate the situation in the region. The team’s report [2], EU legislation [3], correspondence provided by DEFRA [4], and reports to the European Commission [5] constitute the supporting documentation for this evaluation.

Evaluation Format

The last case of CSF was stamped out in November 2000. The final protection zone around the last outbreak was lifted on December 30, 2000. A total of 74,793 pigs, including those on in-contact farms, were slaughtered to eradicate the disease. [6]

The sequence of events in the region to the thirteenth case is described in the site visit report. Three additional cases were detected after the APHIS site visit was completed. However, no

other cases of CSF were detected. Therefore, APHIS is basing the evaluation on the observations made during that site visit and additional summary information provided by DEFRA.

Observations

The site visit report provides detailed observations on the following:

- Pig production system in East Anglia as related to the epidemiology of disease;
- History/epidemiology of the outbreak, including results of traceback and diagnostic complications relative to porcine dermatitis nephropathy syndrome (PDNS);
- Tactical problems encountered during the outbreak;
- CSF diagnosis;
- Legislation and control activities and their application during the outbreak, including slaughter practices;
- Application of geographic information systems (GIS) technology and development of an interactive web site;
- Lessons learned during the outbreak; and
- Surveillance.

In addition, the site visit report states that only breeding units and nursery units had been affected by the time of the site visit. However, based on reports that were provided to the European Commission by MAFF, breeder, rearer, and fatterer units were affected during the outbreak.

Risk factors applicable to East Anglia

MAFF officials identified to the site review team several factors that appeared to contribute to disease spread in the area.

A major factor was the time to first detection of the disease. Detection was delayed, in part, because of the simultaneous presence of PDNS. PDNS is a disease with symptoms similar to those of CSF, and the atypical clinical picture associated with the CSF strain diagnosed in the region. Specifically, symptoms of the CSF strain identified in East Anglia were less severe and serum antibodies appeared later than expected. Therefore, diagnosis and surveillance based on the prevailing knowledge were complicated.

A second factor was the practice of open/outdoor pig production in the area. One theory of disease introduction was that a passerby hiking past the index farm discarded infected meat to which the index pig gained access.

A third factor appeared to be related to husbandry practices. In this regard, one individual who probably contributed to spread of disease among several premises was an owner who was also a lorry driver. This individual carried the infectious agent to several premises.

A fourth factor contributing to disease spread was the positioning of a casualty unit in the vicinity of healthy animals. On one premises, sick animals were positioned in a way that allowed disease transmission to healthy animals.

Finally, during the outbreak, MAFF officials found that their contingency plan was severely limited with regard to its capacity to control disease. MAFF officials recognized the need to update the plan. They also indicated that they were considering formation of an emergency team to address future outbreaks of CSF and other diseases.

Mitigation of risk factors

As stated above, a major factor was the time to first detection of the disease due to the simultaneous presence of PDNS and the fact that symptoms of the CSF strain that broke out in East Anglia were less severe and serum antibodies appeared later than expected. This complicated the diagnosis of CSF. It is thought that PDNS, along with post-weaning multisystemic wasting syndrome (PMWS), may be related to several factors including farm management. [7] Based on experiences in the UK and other Member States, the European Commission issued a Commission Decision dated February 1, 2002. [8] This Commission Decision incorporates a diagnostic manual that establishes diagnostic procedures, sampling methods, and criteria for evaluation of the laboratory tests for the confirmation of CSF. In accordance with the manual, if PMWS or PDNS is suspected, acute CSF must be considered. In addition, the diagnostic manual advises that, under field conditions, clinical symptoms of CSF may only become evident in a holding two to four weeks after virus introduction or even more if only adult breeding pigs or mild strains of virus are concerned.

A second factor contributing to the spread of the disease was the open/outdoor pig production practice. One theory of disease introduction was that a passerby hiking past the index farm discarded infected meat to which the index pig gained access. The Countryside Agency of England has published documents on its website. [9] Several of these documents, especially during the FMD outbreak, advised people who walk the countryside to not feed livestock and to not leave any waste food. There is also a code for use on public rights of way or access land to protect the FMD-free status of the countryside. The code includes warnings not to approach, touch, or handle livestock and to take any waste, including food, home.

DEFRA has also prepared an illegal imports action plan. [10] The plan is designed to reduce the risk of an exotic animal and plant disease from entering the country and threatening the public health, livestock, agriculture, and horticulture industries (one of the key elements of the plan is deterrence). DEFRA will work to ensure a greater awareness of the consequences of bringing illegal food imports into the UK by providing information to passengers and shippers. DEFRA also plans the pilot use of detector dogs, providing amnesty bins, or equivalent measures to encourage the surrender of unintended illegal personal imports, and possibly use x-ray equipment to scan containers and personal baggage to detect illegal imports. In fact, the European Union's (EU) Standing Committee on the Food Chain and Animal Health agreed on September 20, 2002, to introduce interim safeguard rules on the imports of meat, meat products, milk, and milk products by individual travelers entering the EU from certain third countries. The effect of the rules on these travelers as of January 1, 2003, will be that they are no longer allowed to bring into the EU, including the UK, personal imports of meat, meat products, milk or milk products on their person or in their luggage unless accompanied by official veterinary documentation. [11]

In addition, in September 2002, DEFRA sent all livestock farmers a document providing

information on biosecurity measures. This document includes advice to limit and control farm visitors (people and vehicles). The document is entitled, "Better Biosecurity Provides: Peace of Mind, Healthy Stock and a More Viable Business." [12]

As to the potential of disease spread by lorry drivers, current rules require cleansing and disinfection of livestock vehicles used to transport livestock. Cleansing and disinfection of the vehicles is required for farm to farm movements, farm to market and market to farm movements, and farm to slaughterhouse movements. In addition, DEFRA has a document available on its website entitled, "Classical Swine Fever." [6] This document advises herd owners to, among other things, restrict the movement of persons, vehicles, and equipment to and from their premises, and when such movement is necessary, disinfection facilities should be available and used.

A fourth factor contributing to disease spread was the positioning of a casualty unit in the vicinity of healthy animals. On one premises, sick animals were positioned in a way that allowed disease transmission to healthy animals. At this time, people tending stock on farms in isolation units must wear dedicated protective clothing and use hand washing facilities and disinfectant footbaths upon entry and exit from the unit. [4] In addition, farmers have been advised in the biosecurity code and guidance issued by DEFRA, to isolate incoming and returning stock until their health status is assured. Also, farmers are advised that isolation buildings should be as near as possible to the farm entrance and separated from other farm buildings by three meters. [4, 12]

DEFRA currently has a swine fever contingency plan on its website [13], which contains the contingency plans for dealing with outbreaks of CSF in Great Britain. This contingency plan should improve the ability to control CSF should it occur. The contingency plan includes the formation of a National Disease Control Centre and CSF expert groups. The National Disease Control Centre will coordinate the national strategy under the direction of the Chief Veterinary Officer in the event of an outbreak. The head of the National Disease Control Centre is responsible for supervising the disease emergency activities of the local disease control centres. These local centres are responsible for swine fever control (infected premises and restrictions) in their area. The National Disease Control Centre, in the event of an outbreak, alerts the swine fever expert groups to mobilize to the field. The primary task of the groups is to provide the national and local disease control centres with a report in accordance with the guidelines of the European Commission.

As to formation of an emergency team to deal with future outbreaks of diseases, including CSF, DEFRA has identified a comprehensive series of teams required to carry out all essential tasks in the control of an outbreak of exotic disease. Individuals and reserves have been identified to fill necessary posts at short notice. Simulation exercises help to maintain a wide pool of suitable people to fill the necessary posts at all levels. Instructions are being written and tested to ensure that each team member is able to perform effectively when required.

Lastly, during and due to the FMD outbreak in 2001, Great Britain instituted a number of animal disease control and prevention procedures that can be found on DEFRA's website. [10] If these controls and preventions are followed, they should also prevent the occurrence of CSF.

Conclusions

APHIS cites the following factors as relevant to the situation in East Anglia:

- No new CSF outbreaks were detected more than three months after the last CSF infected animals were depopulated in November 2000.
- At the time of this report, East Anglia had been CSF free for 23 months. In fact, all of Great Britain is under the same disease prevention measures that East Anglia is currently under. This CSF-free status is supported by the fact that animal disease surveillance in the country has been extensive because of the recent outbreaks of FMD in the region.
- MAFF (DEFRA) was able to effectively control CSF, despite the atypical manifestations of the strain occurring in the region and the masking of the initial diagnosis by the simultaneous occurrence of PDNS. The effectiveness of the control was mainly due to the close cooperation that MAFF received from the swine industry in making detailed sales records available to reduce traceback time.

Risk Evaluation

APHIS could identify no additional risk factors currently applicable to East Anglia that would justify keeping East Anglia from the list of regions APHIS considers as CSF-free. However, APHIS recognizes that CSF must be promptly ruled out in cases that present as PDNS to ensure early disease detection.

References

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